

ANNUAL REPORTS
FOR
YELLOWSTONE NATIONAL PARK

Religious Services

Services were held in the Chapel at least twice each week from 10 to 11 A.M. every Sunday during the winter season. Congregational, Episcopalian, Anglican, Lutheran, Episcopal, Methodist and Catholic services were conducted.

Recreation

1. That the work in the hospital be carried on during the winter season, including the following, and other work as may be required.

2. That all patients and other persons who would benefit in the hospital be kept in the hospital and that the hospital be kept in the hospital.

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3. That a new building be built at Lake Yellowstone and fully equipped. The present building is inadequate in every respect and building is the answer.

4. That more funds be provided for the hospital, for the maintenance of the hospital, and other improvements for the hospital, and for the hospital and other work as may be required.

5. That the hospital be kept in the hospital.

6. That the hospital be kept in the hospital.

ANNUAL REPORT
FOR
YELLOWSTONE NATIONAL PARK
1925

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YELLOWSTONE NATIONAL PARK

Harold M. Albright, Superintendent, Yellow-
stone Park, Wyoming

General Statement

Yellowstone Park was established March 1, 1872 (Acts, 2274 and 2275, U. S. Stat., 37). Its area is 3,368 square miles, or 2,142,720 acres, lying in Wyoming, Montana and Idaho. If enlarged as proposed on August 22, 1903, it will contain approximately 4,300 square miles, and its boundaries will conform more nearly to natural topographic lines than present lines do.

Weather

The weather for the fall months was unusual in that it was persistently cool and snowfall in material amounts occurred unusually early in the season. Nearly double the normal amount of snow occurred in November. In the state of October 7-11, 1904 inches of snow fell at Mammoth, which is the heaviest snowfall, considering the fact in the record, for so early in the season since the weather bureau record began in 1903. However, with the advent of summer days the snow soon disappeared except at places at higher levels. The outstanding feature of the year's weather was the record-breaking prolonged period of severely cold weather which continued from December 15 to 27. This cold period far surpassed any previous period

of record for severity and duration of low temperatures, establishing for the Park a new absolute winter temperature record of 59° below zero, which occurred at Riverside on the 19th, while -55° occurred the same day at Buffalo Ranch. The previous low record was -50° at Snake River, February 6, 1904, and -47° at Hole Butte, January 21, 1918. Extremely mild weather with deficient snowfall characterized the remainder of the winter. The snow on the ground disappeared about ten days earlier in the spring than usual. April, May and June were months of plentiful moisture, resulting in a luxuriant growth of grass and wild flowers throughout the Park. July 7-12 was a ten-day period of unusually warm weather, the temperature reaching 90° at Mammoth and Riverside on the 11th. The record for the past 25 years shows that the temperature in Yellowstone Park reaches 90° only once in about each ten years. While the greater portion of the country at lower elevations was under the influence of the intense July heat wave with temperatures in excess of 100° , the tourists in the Yellowstone were enjoying breezes from 60° to 70° , as the highest day temperatures, with night temperatures from 40° to 50° , depending upon the location.

Travel in 1925

Park visitors this year totaled 154,222 as compared with 144,178 last year, an increase of 10,124. The rail

travel figures were 44,786 as compared with 41,074 last year, showing an increase of 3,712 over the preceding season.

There was a decrease of 122 rail visitors at the West entrance; the North entrance shows an increase of 1,568 and the East entrance an increase of 260 as compared with the preceding season. 225 cars in via the Lumber or Southern Gateway as compared with 207 last year.

The automobile travel records, for preceding season, at the East and West gates have been exceeded this year. 38,109 persons entered at the East gate and 38,713 at the West. 26,573 auto visitors entered at the North gate and 8,914 at the South.

The number of cars and people reported at the various developed camp grounds during the season are indicated as follows: Mammoth 19,174 cars and 63,899 campers; Old Faithful 26,989 cars and 89,771 campers; Lake 21,538 cars and 71,531 campers; Canyon 17,734 cars and 59,639 campers; Norris 1,544 cars and 5,148 campers; Indian Junction 2,785 cars and 9,285 campers; Turb 2,806 cars and 3,355 campers; Tower Falls 3,534 cars and 11,782 campers; total 99,271 cars and 330,512 campers. In addition, approximately 5,500 campers used the many camping places along the roads.

The west entrance continues to lead in rail travel and the west entrance is the favorite gate for motorists.

The record day for entrance travel this year was July 31st, with a total of 3,633 as compared with 3,668 on July 22nd last year, and 3,333 on August 7th, 1935. The travel figures for the last named date is the record travel for a single day in the history of the park.

The record day for rail travel was July 31st; 1,316 rail visitors arrived at the entrance stations on this date. The largest rail travel day of record was 1,333 on June 30th, 1932. The heaviest rail travel at a single gateway this year was 569. They arrived at the North entrance on July 22nd via the Northern Pacific Railway. Entrance travel in excess of 2,000 occurred on 37 days during the season of 1936 as compared with 17 days in 1935.

There was an increase of 6,143 auto visitors over the total of last year.

A new high record for entrance autos was established on July 7th this year with a total of 777 as compared with 500 on July 22nd, 1934. The record day for entrance autos at a single gateway was July 7th with a total of 333 cars carrying 735 people; this travel occurred at the Eastern, or Gandy, entrance. The previous record was made at this entrance on July 30, 1934, with a total of 224 cars and 696 people.

Total season travel by entrance, 1953 and 1954

						By walk- ing		
	Mail	By automobile	By Motorcycle	Horseback	Pro-			
Category	Visitors	Cars	Visitors	Cycles	Motor-Visitors etc.	Visitors	Visitors	Visitors
1953								
North	17007	8736	26073	42	64	74	1421	49739
West	23387	9815	32043	34	42	86	173	55801
East	7347	11686	31403	42	50	275	66	45772
South	225	2772	8914	10	16	473	23	9672
Pro-season								
Visitors								
North & West								
Total	44786	33068	106529	126	160	1294	1733	155282
1954								
North	13476	8171	26713	40	68	475		40463
West	20400	9553	31580	33	42	96		52187
East	6000	2070	32385	30	22	313		70687
South	207	2871	9763	20	35	681		10685
Pro-season								
Visitors								
North & West							1124	1124
Total...	41074	33609	100186	163	225	1769	1124	144198

Administrative Department

Administrators Office: During the fiscal year from four to eight clerks were assigned in the headquarters office in general correspondence, files, personnel, purchasing, time-keeping, miscellaneous financial matters, information, and a wide range of other duties to this and to other bureaus. Approximately 16,500 pieces of mail were received and 20,479 dispatched.

Appropriations: Appropriations made available since the date of the last report are as follows:

Act	Purpose	Amount
Dec. 5., 1924	Road and Trail Construction	\$30,000
Dec. 5., 1924	Increase of Compensation	21,103
Jan. 20, 1925	Insect Control	5,000
Mar. 3., 1925	Administration, protection & maintenance	36,103
Mar. 3., 1925	Construction surveys & camp grounds, etc.	26,297
Mar. 3., 1925	Road and Trail Construction	100,000
	Total.....	\$228,503

No funds from the 1926 appropriation for fighting fires and repairing flood damage were required in Yellowstone Park.

Revenues for 1925: Funds collected during the fiscal year 1925 and deposited to the credit of Miscellaneous Receipts in the United States Treasury were as follows:

Automobiles and motorcycles	\$ 216,977.06
Hotels and Camps	49,247.49
Transportation	43,706.02
Stores	13,194.95
Miscellaneous	6,037.01
Total.....	\$ 329,162.53

Revenues for the 1926 fiscal year will amount to approximately

\$335,000.

Engineering Department

This department is in charge of Engineer A. J. Dancy, aided by Assistant Engineer E. I. Davis.

Road Maintenance: The Park road system consists of 198 miles of road designated as follows: Grand Loop 137.4 miles, approach and connecting roads 79.1 miles, secondary and roads to points of interest, 81.5 miles. During the 1973 season 191.8 miles of roads were maintained in the Park, 100 miles of road in the Shoshone Forest on the east side of the Park, and 30 miles in the Bitter Forest on the north side. Twenty-four crews were engaged on this work, consisting 147 employees, 55 teams and 2 gravel trucks.

During the tourist season 137 miles of the Grand Loop Road was sprinkled twice daily. The equipment required was nine water sprinklers, two 2-wheel sprinklers and six 4-wheel sprinklers. The water sprinklers are not as efficient as expected because of mechanical failures, necessitating their laying off for repairs when most needed on the road.

A crew of four men using a Gardner brush for transmission made repairs and maintained the sprinkler supply system. Twelve new 1500 gallon rubber tanks were installed, drums rebuilt and supply pipe replaced.

Winter Service: Unusually heavy snowfall in the north and west sections of the park, followed by a cold hard

spring, made the work of opening the Park roads to travel more difficult than usual. In June 1st a crew began blasting in Sylvan Pass and the 15th another crew began at Elk Creek, opening the East Entrance Road on June 15th. The Dunroven Pass road was opened June 18th after a crew had worked 13 days blasting and shoveling. The Continental Divide Road was opened June 16th, the North Entrance Road June 22nd and the Mt. Washburn Road July 1st.

Road Improvements: The first three-year program of improvements to roads in Yellowstone Park consists of 13 projects of which the following named five will be completed, or partially completed this season:

Project #13 - Lake Shore Road. Reconstruction of the old road eleven miles in length along the shore of Lake Yellowstone between West Thumb and Bridge Bay, to replace the present stony, narrow and uninteresting section.

Project #6 - Firehole River Road. Widening for two-way travel a section one and one-half miles in length along the Firehole River, south from Firehole Cascades.

Project #7 - East Thumb-Larnica Creek Road. Widening the present road for three-quarters of a mile over Bluff Point, a preliminary two miles from East Thumb on the Lake Road.

Project #9 - Mammoth-Snowy Falls Road. Widening 1-1/2 miles and surfacing 3 miles between the two old five-mile posts from Mammoth.

Project #11 - Inspiration Point Road. Reconstruction of 2-1/2 miles of road along the north rim of the Grand Canyon.

Bridges: Twenty-three steel bridges, having a combined length of 2200 feet, were painted this year. Following is the specifications for the paint purchased for this job; 15% sublimed blue lead; 10% silico and 10% zinc; 20% pure chrome yellow, 35% white lead; 10% coloring (National Park Service green) and in pure linseed oil.

Crawfish Creek bridge: a 54-foot steel bridge was constructed over Crawfish Creek on the South Entrance Road, replacing an old log bridge that had become dangerous. The new bridge is one that was removed from a location on the Gardiner River in 1919. It is a 15 degree skew bridge and crosses the creek at that angle, permitting the road to be straightened at the crossing. The bridge was placed on concrete abutments.

Buildings: A new ranger station was erected at South of Lake near the site of the Old Ranch Station. It is a 3-room log structure. A 2-room log anvil/cabin was also constructed at the mouth of Blacktail Deer Creek. Both were constructed by ranger labor under the supervision of the Chief Ranger.

A log bunkhouse 16 x 24 and a log stable 16 x 30 were built at Oak Creek for the use of the road crew at that place.

Cleaning of the Roadsides

The most important business part of the year was the cleaning up of the roadsides. This activity has been initiated by an eastern friend of the park system who visited the Yellowstone last year, and as a result of his personal observations developed a plan of action that he has authorized us to carry out at his expense. Already the roads have been cleaned from headquarters at Mammoth Hot Springs to beyond the Geyser Basin, and the interested friend has provided funds for continuing this work to Norris Geyser Basin. The need of roadside cleaning in Yellowstone Park interested me the first time I visited this park, early in the season of 1915. At that time I sought to have an estimate made of the probable cost of this work. It seemed, however, as if this was a project that would not be likely to be undertaken by the Government for many years to come, if ever. Hence, after two or three years of casual discussion of the need of this work, I dropped it. It was with great pleasure, therefore, that I received word of the interest of this man, who had so much public spirit and keen appreciation of the wilderness charm of our mountain parks as to come forward with the means of doing this important work. I inspected the work done last summer and found the roadsides as cleaned even more interesting and attractive than I had dreamed they would be.

(1) 250116 Mile Dam Development.- Mammoth: Installed 8 showers, 4 for men and 4 for women, and put in hot and cold water and 2 wash basins. Built 90 tables.

Thunder Falls: Installed 400 feet 6-inch sewer pipe. dug cesspool and built 48 tables.

Lake: Enlarged water main - 2,000 feet 4-inch galvanized iron water pipe; 1,000 feet 3-inch pipe; 600 feet 2-1/2 inch pipe; 3,000 feet 1-1/2 inch pipe. Built one comfort station. Installed 6 flush toilets, 2 wash basins, 1 urinal and 13 drinking fountains. Built 37 tables.

Fishing Bridge: Enlarged water main - 4,000 feet 4-inch galvanized iron water pipe; 600 feet 3-inch water pipe; 1,000 feet 2-inch water pipe. Built two comfort stations. Installed 16 flush toilets, 2 urinals, 4 wash basins and built 100 tables.

Teah: Enlarged water main - 4,200 feet 4-inch galvanized iron water pipe; 1,000 feet 2-inch water pipe; 100 feet 1-inch water pipe; 60 feet 1/4 inch water pipe, and 1,200 feet 6-inch sewer pipe. Built two comfort stations. Installed 16 flush toilets, 2 urinals, 4 wash basins, and built 50 tables. Built 35,000 gallon reservoir and pump house and installed a 40 h.p. Dain water to operate a Fortington Tension Flange pump which lifts water 120 foot elevation from Back Lake. Capacity of pump 20,000 gallons per hour.

(2) Houseite Control.- Heavy inspections throughout the Park due to exceptionally wet season. Extensive shelling and siltage at the Canyon, Lake, Tower Falls, West Thumb, Upper Basin and Mammoth.

(3) Garbage and refuse disposal.- All dump grounds practically cleaned up. Tin and glass buried. Garbage, not eaten by bears, and paper, trash and wood burned. Special bear-feeding platform constructed at each dump ground. Data collected at Upper Basin, Lake and Canyon for incinerators and tin can crushers.

(4) Miscellaneous.-Operated 6 septic tanks with chlorinators and one without. Supervised operation of 5 swimming pools. Made special water supply investigations for Upper Basin, West Yellowstone, Norris. Prepared plans for sewerage system at Thumb, Camp Roosevelt and Yellowstone Company at Gardiner. Inspected crematorium and latrine supplying the Park.

Protection Department

The permanent personnel of this department consisted of the Chief Ranger, H. T. Hedberg, 3 assistant chief rangers and 27 park rangers. Fifty-two temporary park rangers were added to the force on June 15th, making a total force strength of 83.

Winter Activities: Regular and special patrols were made throughout the fall, winter and spring seasons for the

observation and protection of wild life and the natural features of the Park, wild animal feeding, predatory animal hunting, and repairs and maintenance to buildings and equipment.

Forest Activities: Fire, fish and traffic patrols, informative, guide and lookout service, travel restrictions, checking travel at entrance and exit stations, and at public auto camps, police duties, and a wide range of other duties too numerous to mention here.

Forest Fires: No forest fires of consequence occurred during the year.

Trail Construction, Maintenance and Improvement: Twelve miles of new trail have been built consisting of 2 miles of saddle horse trail from Old Faithful to Spotted Falls, 3 miles of foot trail paralleling the loop road through Bear Head Basin, Fox Creek to Harrison Lake, 3 miles, and about 4 miles in the Tower Falls District, including a foot bridge over Tower Creek. The Tower Falls job was administered by a small band of Eagle Scouts under the leadership of Mr. E. H. Bailey of Great Falls, Mont. The total trail mileage, exclusive of game trails used as patrol, is 94%. The entire trail system has cleared of down timber and repaired.

Fish Planting: Fish planting activities this year with comparative figures for 1953 and 1954 are reported as follows:

	1973	1974	1975
Total collection of black spotted trout eggs from park waters	31,775,000	31,000,000	11,740,000
Number of eggs collected in park, hatched and returned to park waters or planted as eyed eggs	12,775,000	11,944,000	4,336,760
<u>Total number of fish planted in park</u>			
Black spotted trout collected in park	12,775,000	11,944,000	4,336,760
Black spotted trout received from Montana State Hatchery			
	12,775,000	11,944,000	4,336,760
Eastern Brook Trout received from Montana State Hatchery	100,000	49,400	
Rainbow Trout received from Montana State Hatchery	100,000		80,000
Lock Leven Trout received from Montana State Hatchery		41,200	
Total fish plants for year.....	12,775,000	12,033,200	4,416,760
Total shipment to outside points			6,726,000

Buffalo Ranch Operations

The activities at the Buffalo Ranch have consisted of the care and keep of the herd, hay harvesting, regular and irregular visits to stables, fences and corrals, maintenance work on roads and telephone lines and other routine duties. Twenty-five acres

were plowed, cultivated and seeded to wheat, timothy, and red top. 350 tons of hay were fed during the fiscal year ending June 30th. The yield for the season of 1905 was 1000,86 tons.

Buffalo Plains Week

A colorful pageant took place near the buffalo ranch in the Lower River Valley from August 31 to September 6, when a western frontier round-up celebration was staged every day. The huge buffalo herd of over 700 animals, a score or more of Crow Indians from the nearby reservation dressed in the regalia and war paints of other days, and a few real western cowboys made the round-up a thrilling representation of the old days of the West. Visitors to the ranch during "Buffalo plains week" as it was called, were taken from the ranch headquarters to the site of the round-up in the stage-coaches of former days, drawn by four and six horses. The Indian camps were of great interest to visitors. Typical camps with their teepees, open fires, travois, and herds of the cattle, and people with beavers, squaws, and children, were a vivid reminder of the past that not so many years ago the ancestors of these very Indians roamed and hunted over the lands in this vicinity.

Hay Ranch Operations

Wild animal and horse feeding at the various hay ranches during the winter and spring seasons accounted for approximately

664 tons of hay, and of this amount 32 tons were fed at Yancoy's, 336 tons at Slough Creek and 296 tons at Carlinar. This year's tonnage cannot be accurately stated at this time for the reason that much of it has been recently stacked. The approximate yield, however, is as follows: Slough Creek 173.17 tons, Yancoy's 75.43 tons, and Carlinar 77.07 tons, which, together with 1024.06 tons at the Buffalo Ranch makes an approximate total of 1366.73 tons. Further hay ranch activities during the year are noted as follows: 43 acres plowed, cultivated and seeded to oats, timothy and clover at Slough Creek and 30 acres plowed, cultivated and seeded to oats, timothy and clover at Yancoy's.

Predatory Animals

One hundred and eighty coyotes and 1 mountain lion were killed during the year.

Natural Features of the Park

Observations of wild life, geysers and hot springs activities, forests, flowers, birds, etc., have been made by the Park Naturalist and by rangers and are briefly reported as follows:

Wild Animal Conditions: Wild animal conditions have been generally good throughout the year; range conditions are excellent.

Buffalo, Lower River Herd: In January 1934 herd total was 673; the calf crop of 1934 was 171, leaving a herd total of 844 at the beginning of the fall season of 1934. This figure corrects an error of 27 in the reported herd total of last year which was caused by including a herd of this section which should have been included in the count of the Cold Creek-Pelican Plate herd.

The losses during the year were as follows: Ill deaths 16, accidental 5, winter kills 1, killed by authority of the Director 17, total 39, leaving a herd total of 805 at the beginning of the calving season this year. This total consisted of 383 males and 422 females - the males consisted of 162 bulls and 161 steers. Twenty calves of the 1935 crop were counted. The calf crop of 1935 totals 170. Buffalo feeding was begun on December 25th and concluded on April 4th.

Buffalo - Cold-Creek Pelican Plate Herd: The total count during the year was 66; this is the largest actual count in recent years. The preliminary herd total is 125. There was a reported loss of one - a winter kill.

Buffalo Herd: Actual counts during the winter and spring seasons total 125. The estimated total for the year was 150. The reported losses caused by wolves at various adjacent to the park was 6.

Antelope: Antelope conditions are excellent; the herd has wintered remarkably well. There was a loss of 4 during the year, consisting of 2 winter kills and 2 coyote kills. The herd total of late April was 417. There is every indication of a normal increase this year.

Deer: The game counts submitted during the course of the winter season total 170, as compared with 121 last year; they are widely distributed. There were no losses reported during the year. There is an estimated total of 305 in the park.

Beaver: Numerous counts have been submitted by rangers on patrol; the total of these counts is 642. This is believed to be about 1/3 of the total number of lake deer within the park and at points along the Yellowstone and Gallatin Rivers adjacent thereto. The reported losses occasioned by hunters beyond the park boundaries is 7. Other losses consisting of winter kills, coyote kills and accidents, total 35. The total of all reported losses is 42. There is believed to be not less than 1000 mule deer in the park region. White tail deer are extremely rare. There are probably not more than 12 in the entire park.

Elk: The elk are in excellent condition and there is abundant forage for the approaching winter season. Winter kills during the year did not exceed 2 per cent of the herd total. The actual count was 347. Twelve hundred and eighty-eight

Elk: The elk are in excellent condition and there is abundant forage for the approaching winter season. Winter kills during the year 1934-35 amount 2 per cent of the herd total. The actual count was 107. Twelve hundred and eighty-eight were reported slain by hunters at points adjacent to the Park. The losses from all causes were 1707. Careful counts of the herds were made late in April and the total of those counts was 27,774. The calf crop this year is unusually large and the estimated herd total at this time is 30,000.

As to the Jackson Hole elk, the Forest Service and Biological Survey officials in the spring of 1935 estimated the herd at 17,500, not considering this year's calf crop. Five hundred and fifty tons of hay were fed last winter to this elk herd but only 1700 elk used the feed grounds. There will be about 3500 tons of Federal and State hay available for feeding during the winter of 1935-36. The Jackson Hole League has purchased 1700 acres of hay and pasture land near the Biological Survey ranch. The combined ranch areas total about 4500 acres, of which 1000 acres produce hay.

Black Bears: Black and brown bears are extremely common throughout the Park. Mothers with cubs numbering from one to three frequent all the prime big game and the feed grounds at the various hotels and camps. The total number of black bear in the park is believed to be about 200.

Wolverine: Deep-snow grizzlies were observed at

the Canyon Hotel Road passed on July 15th. Five have been frequenting the feed ground at the NATIONAL and 7 were commonly seen at Lake. A total of 15 grizzlies have been reported. There is believed to be not less than 75 bears of this species in the park.

Beaver: Extensive beaver activities have been observed at all points suited to their requirements. There appears to be a normal annual increase.

Other Small Animals: Marten, mink, muskrat, weasel, otter and fox were frequently seen throughout the winter season. Skunkhounds, porcupines, badgers, etc., are numerous at all points.

Birds: The bird life, as is to be expected, continues much as usual. The interest of tourists in bird life is marked and this interest is fostered by the collections and lectures in the Museum and by the lectures on the park's rich wild life. Several sets of eggs, new to the collection, have been added.

The Roosevelt Wild Life Department Station, Syracuse University, this year published a book on the birds of Yellowstone Park by H. V. Minner. This is a very valuable contribution to the literature of Yellowstone Park. The book is illustrated with color plates showing many of the common species of birds of the Park.

Flowers: The snow was particularly favorable for flowers and the latter have been among the outstanding attractions of

this year. The collection of fresh flowers on the library porch has attracted a great deal of interest and increased the library attendance and doubtless the sales of literature. The pressed flower collection in the library has also been enlarged and thus made more attractive and effective.

Insect Infestations and General Forest Conditions

Closely related to our task of preserving the landscape of the park is the necessity we have recently found for attacking several insect pests in the forests. These threats to destroy several miles of timber along the roadways near the western entrance and in the vicinity of Oak Mountain. Under the special appropriation granted by Congress for the control of insects, the Heliothis pine forests along the west entrance road were again sprayed, and it is believed that this timber did not suffer further injury this year.

As to the spruce budworm which is defoliating the spruce and Douglas fir timber, in the Hollerwing and Crescent Hill areas, this insect was not so active this year and did not quite reach the peak. Preparations were made for spraying the timber along the road and the County foreman advised that far.

Successful attacks have also been made on several infestations of bark beetles.

The Bureau of Entomology cooperated closely in this work, and throughout the summer kept one of its most skillful specialists at work on the various control problems.

Geyseers and Hot Springs

Harroth Hot Springs: Jupiter Terrace shows a normal flow of water, but lower levels filled than usual. Lower Terrace was very active at all points. The new terrace level found retained its attractive coloration of last year and built up rapidly. No change in Niagara and Steam-palm Terraces. Royal Terrace showed a slight increase of activity, yet is nearly dead. The new Highland Terrace, which became active early in the spring of 1937, was one of the most beautiful features of the Harroth Springs area. The flow of the "White Elephant" gradually moved southeast along the Niagara line. Harrow Gorge is practically extinct. Canary Spring is as usual. No change in Igloo Terrace. A new spring beside the railway near Union Terrace showed considerable activity in May and June, but has since ceased to flow.

Harroth Forest Road: The Constant last played on the 13th of July. It also played on the 13th of July. Volcanoes moved about twice each week. The new craters have been about 20 years, northwest of Constant. Their periods of activity have been, respectively, about 12 and 5 hours. The other craters have been as usual.

Lower Geyser Basin: A cloud of steam has been seen to rise from National Park Mountain about every 70 minutes following rain; less often various other steaming points have been noted. An interesting hot water region in the Firehole Canyon will be made available to tourists by the completion of the new road, as expected in 1936. The general activity is about as usual, no change being observed in the Craters, Telet Pots and so on. The first eruption of Fountain Geyser observed in two years occurred on July 4.

Upper Geyser Basin: Conditions have been about as usual since June 21 when a new vent was first observed in the Giant Geyser.

Geothermal Section: Unusual conditions were observed about 7 A.M. June 21. The mudslide cone filled mudflats: geyser activity increased. In one lava well nearly every minute the water rose 5 to 25 feet. The mudflats were frequent for two days. Small geysers burst in some large pools. No marked change since that time.

Information Department

47,442 people visited the Information Office at headquarters during the season; 7,306 in June, 23,175 in July, 12,305 in August and 8,162 in September; making the total of 50,948 during the season 1935 and 53,827 during the season of 1936. 31,870 free publications were distributed.

at the information office and ranger stations in the Park and 8,009 Government publications, including 2,201 portfolios were sold. Compare this total sale with 3,501 Government publications, including 874 portfolios, disposed of last year. In addition 1,187 books of other publishers were sold.

Lecture Service: This service at Mammoth Hot Springs consisted of 3 lectures each evening before audiences totaling approximately 72,160. Lectures were similarly conducted at Old Faithful and Tower Falls and were attended by approximately 40,232 persons at Old Faithful and 1,194 persons at Tower Falls; as compared with 68,000 at Mammoth and 36,000 at Old Faithful last year.

Guide Service: The regular guide parties were conducted twice daily over the formations at Mammoth Hot Springs and Old Faithful. Special guide service was also furnished at these points upon request. The season total of the guide parties at Mammoth Hot Springs was 14,256 and 31,332 comprised the season total at Old Faithful; the guide party total at Tower Falls was 1,100 as compared with 11,100 at Mammoth, 27,701 at Old Faithful and 1233 at Tower Falls last year.

Electrical Department

Electric System: The following table shows the total

production of the power plant and disposition of current as compared with similar data for the fiscal year 1924.

The peak load for the year was 164 kilowatts as compared with 124 kilowatts last year.

	1923-24	1924-25
Total production in kilowatt hours	451,822	600,610.60
Sold to park utilities	85,793	100,126.67
Consumed for street lighting	23,786	21,006.00
Balance, consumed by Government buildings, for power and lighting, lost on lines, etc.	351,533	479,467.33

On account of the increased load it has become necessary to run two machines continually during the Park season.

The interior of the Power Plant was kalsanized in April, 1925.

Telephone system.— A new telephone line between Morris Junction and Lake Hotel was constructed by the Yellowstone Park Hotel Company and National Park Service. Twenty-five foot cedar poles and 4 pin fir cross arms were used. Between Morris Junction and Canyon Junction 8 wires were placed which provides two metallic circuits and one phantom circuit for the Hotel Company and the same for the Park Service. Between Canyon Junction and Lake Hotel four wires were placed, making two metallic circuits and one phantom circuit. The new line was located out of sight in the timber wherever

possible. Corners were double armed and poled, and other first class construction methods used. The completion of the new line permitted the dismantling of the two old unsightly lines that have been eye-sores on the landscape for many years.

Telegraph and Telephone Statistics

Telegrams

(Telegraph Office discontinued September 30, 1924)

	1923-24	1924-25 (3 Mos.)
Government sent.....	1,198	538
Government Received.....	744	236
Commercial sent.....	1,563	643
Commercial received.....	1,146	292
TOTAL.....	4,641	1,514

Telephone Calls on Government Switchboard

Government local lines.....	74,896	98,203
Hotel Company lines.....	8,320	11,775
Long Distance Connections...	3,184	3,452
TOTAL.....	86,400	111,430

Painting Department

The Master Painter and his assistants painted Sylvan Pass Ranger Station, and Upper Basin House where was constructed. Approximately 1000 signs were made, painted, repaired and touched

er. Thirty-four tracks and water sprinklers, 2 passenger cars, 22 road graders, 62 dump wagons, 16 horse drawn sprinkler wagons, and 4 spring wagons were painted, lettered and numbered. Three wards in the hospital, including furniture, and several sets of quarters were painted and re-decorated. Twelve roofs were painted at length; also fire equipment and fire hydrants.

Mechanical Department

The mechanical department made repairs to all tracks in use; overhauled 34 tracks, 4 touring cars, 1 Caterpillar, 1 steam shovel and 1 compressor, and made six new freight trailers for P. W. S. Trucks. The blacksmith overhauled 62 dump wagons, 16 road graders, repaired small equipment of all kinds, and did horseshoeing. The shop also built 35 camp toilets and 330 camp tables.

Property and Transportation

Under the direction of the General Director of Transportation, 2773 tons of material, equipment and supplies were moved from railroad terminals to headquarters. From headquarters 11 trucks were operated through the work supply road camp, construction camp, etc. The total mileage of the trucks was approximately 60,000. A number of 16 men were assigned to the warehouse and to the Transportation were 6,971.92 ton miles hauled.

Improvements By Public Utilities And Individual Operators

Yellowstone Park Game Company: Mammoth: Reconstructed 130 permanent lodges with new window frames, new floor coverings, and replaced all old canvas with new boards; painted above lodges, also 6 other buildings in the Camp; erected one new flush toilet building and equipment; planted new lawn in front of Main Building with grass, trees and shrubbery; extended water lines to remote parts of camp; enlarged stage in recreation hall.

Old Faithful Camp: Constructed new delicatessen and lunch counter building, in the public automobile camp; installed 55 one and two-room tent lodges in automobile camp; constructed 55 one and two room, all board and pole lodges in Old Faithful Camp; built pergola between the lobby and main dining room; erected a pole and canvas awning over loading platform; extended water lines in parts of camp not heretofore supplied.

Lake Camp: Reconstructed 30 tent cottages into permanent pole and frame lodges; installed wire windows in all dormitories; made addition to old kitchen; erected pole and canvas awning over loading platform. Commenced construction of a new log and frame building, 60' x 164'.

Geysers Camp: Constructed a large lobby 55 feet wide by 175 feet long, with extensions to this building of a series

about 30 feet wide and 55 feet long for a curio store; also an addition to the new building, 30 ft x 45 ft for use as a writing room. Constructed a building 30 ft x 90 ft used as a service building, housing rooms for men and women's flush toilets, barber shop, dispensary, general work office, storage rooms, etc. Extension to dining room about 40ft x 60 ft; boiler capacity doubled; 12 new one and two room permanent lodges of frame and pole were constructed; lunch counter was added to delicatessen; 24 one and two room canvas and frame tents were installed near Canyon public automobile camp.

Camp Roosevelt: Work at this camp was in the nature of improvements to lodges built in past years.

Sylvan Pass Lodge: Constructed large sewerage system; constructed one outside men's flush toilet building fully equipped and connected with main sewerage system; rebuilt old bridge across Shoshone River; constructed a barn 16 feet wide by 30 feet long; considerable riprap work was done in the river to save water from washing into camp grounds; installed cable across the river to carry pipe line.

The Buffalo Jones Museum and Zoo.

An interesting development of the year in the Yellowstone, was the establishment of the little museum, relating primarily

to buffalo, in the old log cabin built by the famous "Buffalo Jones" over 20 years ago, when he was in charge of the newly acquired herd of bison, which is now the magnificent Lower Valley herd of about 500 animals. In this little room there has been assembled a very interesting collection of pictures of buffalo herds, bison and most interesting specimens, buffalo hunters, bison heads, bison and horns, and such other material reminiscent of early days in the West.

Back of the old Buffalo Jones cabin a new one has been built, and it now houses four very tame bears, a badger, several crows, a pet buffalo calf, and a number of different species of birds. During the summer, 15 fine buffalo from the Lower Valley herd were kept there on exhibition. This summer and zoo were visited by over 70,000 people during the summer.

Yellowstone Park Hotel, Canyon.- Harrold: New passenger elevator installed; new 400 gallon per minute fire pump installed; new 220 line Gamma Battery Switchboard; telephone cable from Harrold Hotel to Mr. Child's and Mr. Child's residence, thereby eliminating telephone poles in the vicinity of Liberty Gap; all telephone wires back of Harrold Hotel moved off of the Mill; all wiring in basement replaced; 22 new radiators installed.

Old Faithful A: 400 gallon per minute fire pump installed; entire bath shop remodelled; new bill storage box for rent.

and five other cold storage boxes installed; several new pieces of kitchen machinery installed; exhaust fan in kitchen installed; 25 radiators installed; the fire escapes extended to ground and additional fire escape built at rear of old wing; new car-wash and paint shop built; old plumbing shop moved from rear of hotel.

Lane: 400 gallon per minute fire pump installed; plumbing installed in barber shop and buffet; new six ton ice machine installed; 500,000 gallon concrete reservoir now being installed; new toilets, basins and tubs for kitchen employees installed; new girls' dormitory completed last fall and in use.

Cannon: 400 gallon per minute fire pump installed; 40 radiators installed in girls' dormitory; entire exterior of hotel now being painted; a great deal of wallpapering and painting and fitting in all rooms has been done; plans being made to build a new men's dormitory at Canyon; additional fire escapes also installed.

Miscellaneous: About a thousand dollars' worth of new fire-fighting equipment, such as fire extinguishers, has been distributed between the four hotels. Joint telephone lines, for Hotel Company and Government, built from Harris to Lane.

Yellowstone Park Transportation Company: New storage garage at Gardiner finished last fall; new reinforced concrete

machines shop, new boiler house, buildings for employees and the residences of Gerdman. Fifty new horses, 3 new harness teams, and one five-two track; several truck radiators and truck purchases. Repair shop and tire shop built at Hermeth to replace building destroyed by fire on March 30, 1933.

Old Fairford: Old saddle house stable remodeled. New hay shed and grainery built.

Canyon: Extension to mess house.

Yellowstone Park Boat Garage: Ten new steel pontoons purchased.

J. E. Harms, official plant grower. -Grand Canyon: Constructed and outfitted picture show in building adjoining new lobby of Canyon Camp. Installed two large water filters for use in reserving organic and inorganic ingredients from water used in photo finishing plants - one at each end of Canyon Junction and other at Hermeth.

Harry T. Bailliey. -Remodeled and installed ten toilet tanks; also washing machine and extractor; laid 125 square feet concrete floor in laundry room.

George Whittier, gardener. -Completed part of Canyon Shore started last fall - now used as a delicatessen. Improved grounds in front of Canyon Shore, hauled 50 loads of gravel for filling in. Worked at public water works at Hermeth

replaced, using logs and pencils for driving. At Mammoth service station a new air pump was added. New fixtures were installed in Canyon and Mammoth stores.

U. A. Hamilton, merchant.- Enlarged Fishing Bridge store to double the former size, and put in a better lighting plant. Built a 30' addition to Basin Auto Camp store. Constructed knotted wood porch on Basin store. Installed latest model Liquid Carbonic fountain. Put in new National Cash registers and transferred old ones to Lake store. Ten radiators were purchased to be operated jointly with The Best Garage.

Fraser & Trislering - Fort Carlo Store.- Extension to shop 40' x 50', making present store space 80' x 50'. Erected ice house and garage; enlarged kitchen and storerooms; added 3 bedrooms and bath for employees; repaired and painted old building and added office. Installed iceless soda fountain with 40 gallon capacity; new refrigeration; shoe cover; steam table and full equipment for serving meals.

Mammoth auto camp. Constructed log store with two rooms and bath for employees. Installed range, steam table and full equipment for delicatessen and meals.

General Recreational and Human Activity

The main museum at Mammoth Hot Springs headquarters was crowded considerably during the year, especially after the

administration was recognized by the Superintendent and Mr. J. E. Barnes was made its acting director. Mr. Barnes, who has been in Yellowstone National Park each year since early childhood, and who has been active in exploring every corner of the park, is working without pay and devoting a large part of his time to the advancement of the interests of the nation. I feel that we are unusually fortunate in securing Mr. Barnes' public-spirited services, and he is worthy of highest commendation for his unselfish work.

During the summer, Chief Park Naturalist Samuel F. Hall made a comprehensive study of the educational activities and requirements of Yellowstone National Park. In this he was aided by Dr. Frank R. Gossler, of New York, who has been giving freely of his time in getting a comprehensive knowledge of the educational requirements and opportunities of the national parks and national monuments. In early September Dr. Barnes E. Barnes, the chairman of the executive committee of the committee on science in national parks of the American Association of Science, visited Yellowstone National Park and in company with Mr. Barnes made a thorough study of the needs of the park service and the other requirements of the park along the lines of educational equipment and other facilities together with buildings, for carrying on natural history study and information service in such a way as to interest and attract park visitors to this

work and thus enhance the pleasure and benefit of their year tour.

From every standpoint, therefore, the ablest view of Yellowstone Park has been readily adopted and the prospects for a comprehensive mass development seem particularly favorable, which is in line with the line I endorsed at this point in my report of last year.

Frederick and Family

In April 25, 1905, a supplemental agreement was entered with Fred A. Frederick to construct and operate, as an incidental privilege to their operations in the park, an ice cream and soft drink booth on the formations near Devil's Kitchen.

In December 20, 1905, a contract was entered into with Dr. George A. Stetson of Livingston, Montana, covering medical services in Yellowstone Park, to continue in force until terminated by one or the other of the parties in interest. In May 21, 1905, a contract was entered into with Dr. George A. Stetson covering medical services in Yellowstone during the winter months.

Department of Justice-U.S. Commissioner's Court

Mr. John T. McGraw, Commissioner since 1904, presiding. Proceedings had in 14 cases during the year. There were

27 convictions and 6 acquittals, one was heard over to the United States District Court. A total of \$449.50 in fines, exclusive of costs, were imposed. There were 21 cases involving violations of traffic regulations, 1 case of drunken and disorderly conduct, 2 cases of failure to report, two cases of trespassing and disorderly conduct, and 3 cases of interfering with formations, 1 case involving the violation of the National Motor Vehicles act, and 4 cases involving the passing of fraudulent paper.

Post Office Department

New equipment was purchased and the post office was moved to more commodious quarters this season. The business shows an increase over last year, mostly in proportion to the increase in travel, and cash receipts were paid in excess of operating costs, due to increase in rates on picture post cards. The business handled by the carrier has more than doubled.

Department of the Interior

Geological Survey.—The Park water gauging stations were inspected several times by hydrographic engineers of the U. S. Geological Survey, and as this report is written one of these engineers, Mr. Vetch, is here installing an automatic gauge and recording station on the Lamar River.

Department of the Interior

Bureau of Fisheries: Under District Supervisor C. F.

Gillar, a very efficient force of workers of this bureau undertook to carry on what gave promise of being the greatest egg take in the history of the Park, but high water in the streams prevented spawning except in the lake and after weeks of herculean effort a total of only 12,000,000 eggs was the result. Several new fish traps were installed in streams tributary to Lake Yellowstone, and a new collecting station was built at Clear Creek. Returned to park waters, 4,306,760 black spotted trout; shipped to outside points, 6,861,000 black spotted trout.

Department of Agriculture

Weather Bureau. -Observer E. H. Fletcher rendered his usual efficient service in the Weather Bureau here. He prepared many weather reports and statistical data for us.

Bureau of Entomology.-Under funds provided for the National Park Service for insect control, the Bureau of Entomology detailed Dr. M. E. Burke, one of its experts, to study

forest insect infestations in Yellowstone Park. He supervised spraying operations to control the bark beetle, surveyed the various areas of forest infested by insects, marked bark beetle infested trees for cutting, and advised the Superintendent on general forest conditions as affected by his work. Dr. F. S. Craighead, and Dr. J. C. Graves of the Bureau were here on inspection and to confer with Mr. Burke.

Treasury Department

Public Health Service.—As usual the Public Health Service cooperated closely with the National Park Service in supervising the creation and maintenance of sanitation structures and systems used in the name of public health. Upon the discharge of Dr. J. H. Wolfe, Dr. H. A. Strickland was appointed Acting Assistant Surgeon for the Park. In early June Sanitary Engineer C. R. Brown spent two weeks in the park and did some notable work. With the Chief Sanitary Engineer of the Park Service he supervised the improvement of geothermal spring, all sanitary features being designed by him. He also laid out other work to be done during the summer, and gave full instructions for work to be accomplished by Associate Sanitary Engineer I. J. Macdonald, who was in the Park throughout the summer. Dr. Strickland directed specific control measures, collected and shipped samples of

Drinking water in order that they might be secured; inspected the water course, garbage dumps, swimming pools, creeks, etc. The general sanitation in the park throughout the season was excellent. Inspections were constantly made by Mr. Nicholson and Mr. Mendelsohn.

Congressional Inspections and Investigations

On August 6th, Honorable T. C. Craven, Chairman of the Sub-Committee of the House Appropriations Committee of the Interior Department Bill, accompanied by Congressman Frank Murphy, a member of the Committee, and Mr. W. J. Bailey, Assistant Director of the Budget, entered the Park at the eastern gateway and until the 15th were engaged in inspecting the activities of the Service. From August 15th to the 17th the President's Commission on Conservation Between National Parks and National Forests, headed by Congressman H. A. Tamm, visited, with a pack train, the area proposed to be added to the Park, and on August 21st, at Jackson, Wyo., unanimously recommended the inclusion of the Teton Yellowstone and Wind-Cape country in the Park, and the establishment of a separate unit of Yellowstone Park to include the Teton Mountains.

On August 27-30 inclusive, a Sub-committee of the Senate Public Lands Committee, including Chairman H. H. Mitchell and Senators H. H. Cushman and T. L. Gildie visited the Park,

inspected the improvements and utilities and held hearings at Gardiner where complaints against the park were presented, and in turn answered by park officials.

Altogether 4 U. S. Governors and 16 members of the House of Representatives inspected Yellowstone during 1907.

Opening of the Park

The opening ceremonies were held on June 10 at the western entry. Co-operating with the National Park Service in preparing for these ceremonies and in conducting them was the Yellowstone Hotel. Numerous publicity men, photographers, etc., were invited to the ceremonies by the railroad. Delegates from the Fort Hall Reservation were also brought in. Four Governors were present - Governor Nellie Taylor Ross of Wyoming, Governor J. E. Brisson of Montana, Governor C. C. Weyer of Idaho and Governor Gen. H. Dorn of Utah. Governor J. E. Brisson of Montana was Chairman of the ceremony. All of the Governors spoke of the great beauty and interest of Yellowstone and the importance both from the scientific and recreational standpoint to the adjoining states. At the close of the addresses the bars of the park were let down, each Governor letting down one bar. All of the Governors met together just before leaving and adopted a resolution stating their support in keeping Yellowstone National Park intact free any encroachment by private interests or from commercial exploitation.

Vital Statistics

There were 4 births and 11 deaths in the year during the year.

Hospital and Medical Service

In the hospital, leased to Dr. Geo. A. Shuster, of Livingston, Mont., excellent service was rendered. The entire of the hospital was fully equipped for contagious cases. The following cases were cared for; 25 fractures; 6 amputations; 25 major operations; 147 sick - total 203. 1003 cases were treated in the hotel and permanent care dispensaries.

Dr. J. Frank Telfe continued to render service to Government employees under contract until December 31, 1907, when his contract expired, and was not renewed. He attended to 96 home calls and 126 office calls. On June 1st, Dr. H. A. Strickland was appointed to succeed Dr. Telfe, and he made 126 professional calls and had 337 office calls.

School

School opened September 15, 1904, and closed May 22, 1907. There was an average enrollment of 15 pupils - 7 boys and 8 girls; teacher, Mrs. Vera Green. The school was maintained by private subscription.

Religious Services

Services were held in the chapel at least twice each

sometimes three or four times every Sunday during the tourist season. Congregational, Presbyterian, Baptist, English Lutheran, Episcopal, Methodist, and Catholic services were conducted.

Recommendations

(1) That the Park be enlarged in accordance with the recommendations of the President's Coordinating Commission which, on August 22, recommended a revision of the Park boundaries to include the petrified forests of the Gallatin region, the head of Pebble Creek, the Hoodoos Basin, the Upper Yellowstone and Thorofare region, and the best part of the Teton Mountains.

(2) That more funds be provided for the maintenance of the roads, trails, telephone lines and other improvements, and particularly for the general sanitation and extension of public camp grounds.

(3) That every effort be made to interest the Laura Spelman Rockefeller Foundation in the need of an adequate museum development such as the Foundation has made possible for Yosemite Park.

(4) That a new fish hatchery be built at Lake Yellowstone and rearing ponds for the care and feeding of fish until they reach the fingerling age be constructed at Mammoth Hot Springs.

The present system of planting fry is not effective nor satisfactory but it is the very best thing that can be done under existing conditions.

(5) That a study by competent authority be made to determine the best type of road surfacing to be ultimately placed on Yellowstone Park roads in order that plans for future surfacing of the roads may be developed.

